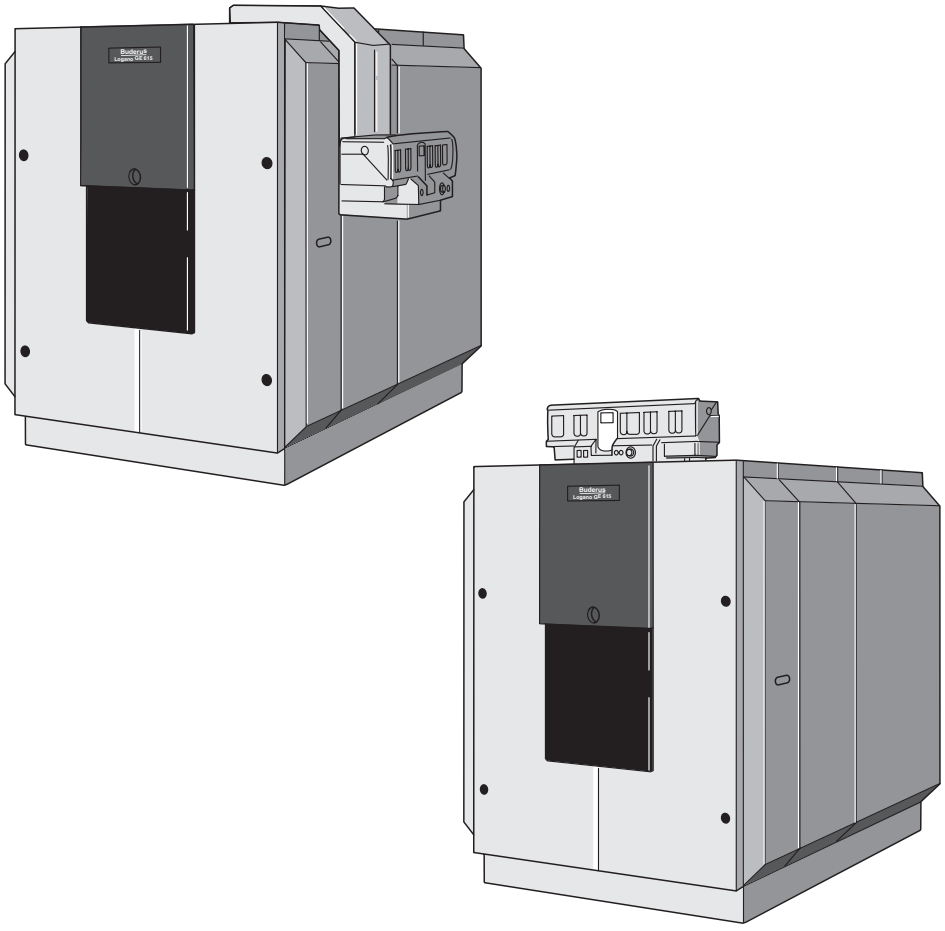
Operating instructions

Logano GE615 boiler



Buderus

Contents

1 Safety information and explanation of symbols

1.1 For your safety

Installation and operation

- Installation and commissioning must only be carried out by qualified installation engineers.
- Observe all instructions to ensure correct operation.
- Only use the boiler for its intended purpose.

Maintenance

- **Customers are advised to sign an inspection/ maintenance contract with an authorised contractor and to have the heating system serviced annually.**
- The operator is responsible for ensuring that the heating system is safe and environmentally compliant (legislation on emissions or requirements applicable in respective country).

Read and observe the safety information and codes of conduct:

If you can smell gas, there is a risk of an explosion

- Close the gas shut-off valve.
- Open window(s).
- Do not operate electrical switches and mobile phones.
- Extinguish all naked flames.
- **From outside the building: call gas supplier, authorised installer and emergency services.**

If you can smell flue gases, there is a risk of poisoning

- **Switch off the heating system (page** 10**).**
- Open windows and doors.
- Inform an authorised installer or gas supplier.

Risk of poisoning due to insufficient ventilation during open flue operation

- Do not cover or reduce the size of ventilation openings in doors, windows and walls. If you do, the heating system must not be operated.

Risk of fire from explosive and inflammable materials

- Inflammable materials or liquids (paper, thinners, paints, etc.) must not be used or stored in the boiler room.

Warning: frost

The heating system can freeze up in very cold weather if it has been switched off:

- Leave the heating system switched on all the time.
- If there is a fault: Reset the fault immediately or call an installer.

Caution: system damage

- Keep the combustion air free from aggressive substances (halogenated hydrocarbons, for example, contained in spray cans, solvents or cleaning agents, paints and adhesives). This prevents corrosion.
- Prevent heavy contamination of the combustion air by dust, airborne seed, etc.
- Do not hang up any washing to dry in the boiler room.

Caution: environmental damage from oil leaks

- If using oil as a fuel: Arrange immediately for an installer to investigate and rectify the cause of any oil leaks.

1.2 Explanation of symbols

Safety information throughout the document is signalled by a warning triangle contained within a frame.

Signal terms indicate the seriousness of the ensuing risk if measures for minimising damage are not taken.

- **Caution means that slight material damage may occur.**
- **Warning means that minor injury or severe material damage may occur.**
- **Danger means that severe injury may occur. Very serious cases may result in death**

Notes are identified in the text by this symbol. They are bounded by horizontal lines above and below the text.

Notes are included with important information for situations in which there is no danger for persons or equipment.

2 Information about the Product

2.1 Product overview

This boiler is a low temperature boiler that complies with DIN EN 303 for oil or gas combustion with modulating boiler water temperature control and no minimum return temperature.

The main components of the Logano GE615 are:

- The boiler block transfers the heat generated by the burner to the heating water.
- The boiler shell and insulation prevent energy loss.
- The control panel monitors and controls all electrical boiler components.

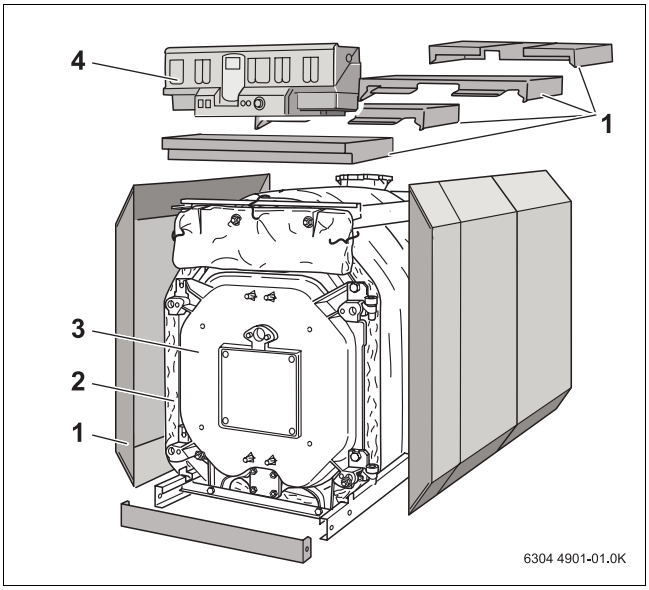


Fig. 1 Logano GE615 boiler

1 Boiler shell (casing)

2 Insulation

3 Boiler block

4 Control panel

2.2 EU Declaration of Conformity

CE The design and operation of this product conform to the applicable European directives and supplementary national requirements. Its conformity has been verified.
The Declaration of Conformity can be viewed at www.heiztechnik.buderus.de or alternatively can be requested from your nearest Buderus sales office.

2.3 Correct use

The Logano GE615 boiler is intended for generating heating water. You may use any type-tested oil or gas fired burners to EN 267 or EN 676 provided their operating range meets the boiler specification.

Using the boiler for any other purpose will be considered improper use. Buderus accepts no liability for any damage resulting as a consequence of such use.

3 Regulations

3.1 Boiler room

Caution: Boiler damage

Through contaminated combustion air.

- Never use chlorinated cleaning agents or halogenated hydrocarbons (as, for example, contained in spray cans, solvents or cleaning agents, paints adhesives and thinners).
- Prevent heavy build ups of dust.

Caution: System damage

through water.

- In case of an acute risk of flooding, disconnect the boiler from its power supply and shut off the fuel supply before water enters the boiler room.
- After a flood, have the heating system checked by a installer before re-commissioning.
- Ask your installer to replace any valves and control/regulating equipment that have come into contact with water.

3.2 Quality of heating water

Water is used as the heat transfer medium in your heating system. Water is given a different term depending on its function in the system.

- Heating water:
  Water contained within your heating system.
- Fill water:
  Water used for the first filling of your system before commissioning.
- Top-up water:
  Water used to top-up your system in the event of water loss.

All water contains substances, e.g. Ca $(HCO_3)_2$ (calcium hydrogencarbonate) that could affect the operation of your heating system. These can cause corrosion, scale formation or deposits.

We recommend that you regularly monitor the quality of the fill and top-up water and treat it accordingly as and when necessary to ensure correct operation of the product.

Caution: System damage

through corrosion or scale formation as the result of using fill and top-up water that does not conform to the system-specific requirements.

- Ask your installer or water company for details of the $Ca(HCO_3)_2$ concentration (calcium hydrogen carbonate) in your supply area.
- The fill and top-up water will have to be treated if it does not meet system-specific requirements. Consult your installer if this is the case.

Your installer will enter the fill water level and quality in the operator's log book, which is maintained by the installer and included in the technical documentation.

3.3 Correct fuel

This heating system requires fuel of the correct type and grade to ensure its correct operation.

Caution: System damage through unsuitable fuels.
- Use the specified fuel only.

Follow the advice of your installer if you want to convert your heating system to another type of fuel or use fuel with a different specification.
Your installer will enter in Table 2 (below) which fuel is used in your heating system.

System				
Suitable fuels	**EL heating oil** (to DIN 51603)	for Austria: **L heating oil** ("Schwechat 2000" light oil)[1)]	**Natural gas**, **LPG** Type:	
Fuel used	☐	☐	☐	☐
Date/ signature				

Tab. 1 Suitable fuels and fuel used

3.4 Maintenance interval

Heating systems should be regularly maintained for the following reasons:

- to achieve a high level of efficiency and to operate the system economically (low fuel consumption),
- to achieve a high level of operational reliability,
- to maintain the cleanest possible combustion.

Caution: System damage through a lack of, or unsatisfactory, cleaning and maintenance.
- Have your heating system inspected, cleaned and maintained by your installer once a year for gas and 2 for oil[1].
- We recommend you sign a contract covering an annual inspection and maintenance on an as-required basis.

1. If L heating oil ("Schwechat 2000" light oil) is being used, cleaning and maintenance must be carried out twice a year.

4 Commissioning and operation

4.1 Before switching on

Before switching on, ensure that

- the operating pressure and fill level are correct,
- the fuel supply is open and
- the heating system emergency stop switch is switched ON.

4.2 Checking the operating pressure

4.2.1 When should you check the operating pressure?

Recently topped-up heating water loses much of its volume in the first few days because it releases gases. This causes air pockets, and the heating system will start to make a noise.

- After installing a new heating system, check the operating pressure daily for the first few days. If necessary top up with heating water and bleed the radiators.
- After a while the operating pressure will only need to be checked monthly. If necessary top up with heating water and bleed the radiators.

4.2.2 Checking the operating pressure (sealed systems)

The registered installer will have set the red needle on the pressure gauge to the required operating pressure (at least 1 bar overpressure).

- Check that the pressure gauge needle is within the green field.
- Top up with heating water if the pressure gauge needle is below the green field.

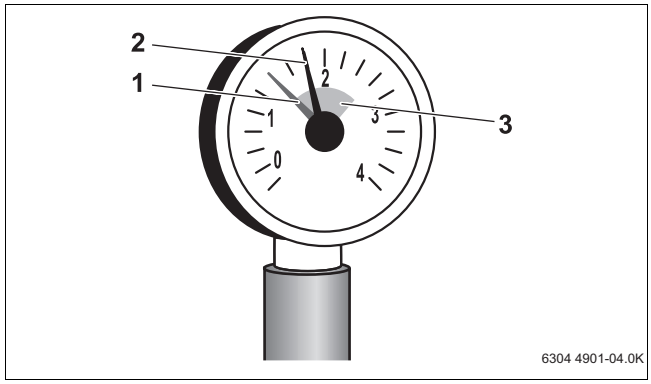


*Fig. 2 Pressure gauge for **sealed systems***

1 Red needle

2 Pressure gauge needle

3 Green field

4.2.3 Checking the fill level (open system)

The installer has set the needle on the pressure gauge to the required level.

- Check that the pressure gauge needle is within the red field.
- Top up with heating water if the pressure gauge needle is below the red field.

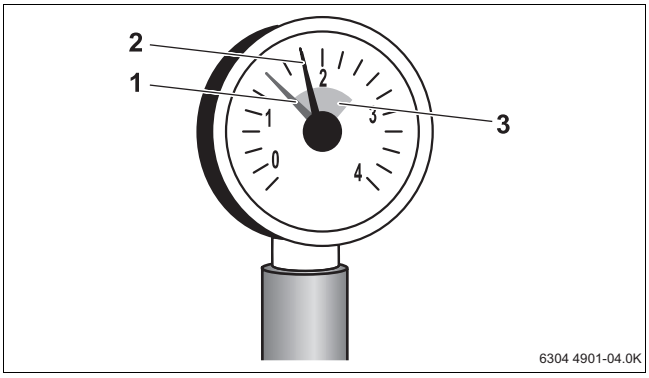


*Fig. 3 Pressure gauge for **open systems***

1 Pressure gauge needle

2 Greenneedle

3 Red field

4.2.4 Filling the heating system

Filling and refilling of the heating circuit must been carried out by a method that has been approved by the Water Regulation Advisory Scheme (WRAS), for the type of heating appliances, i.e. Domestic (in-house) Fluid Category 3. Non-Domestic (other than in-house) Fluid Category 4. Depending on the Fluid Category the approved method should comprise of the following:

1. Requirements Fluid Category 3 systems (fig see right)

- Control valve (stop valve) including a double check valve on the mains cold water supply pipe
- Temporary connection to e removed after filling (filling loop)
- Control valve (stop valve) on the heating system pipework

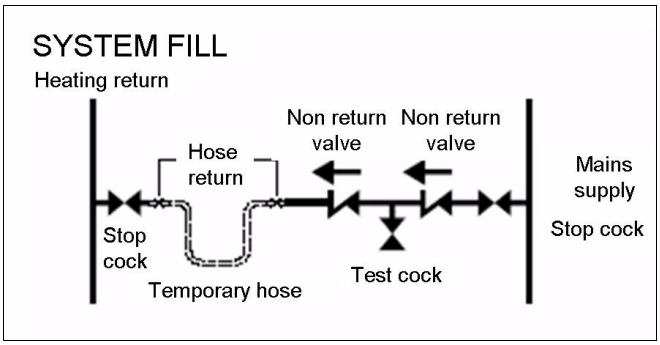


Fig. 4 Requirements Fluid Category 3 systems

2. Requirements Fluid Category 4 systems (fig see right)

- Control valve (stop valve) on the mains cold water supply pipe
- Strainer
- Verifiable Backflow Prevention Device with reduced pressure Zone(RPZ valve assembly) incorporating a Type BA air gap
- Tundish
- Control valve (stop valve) on the heating system pipework

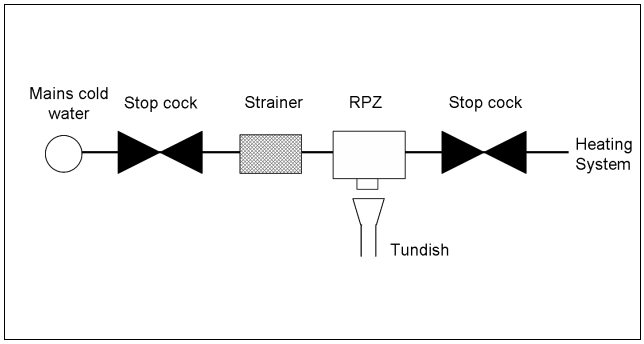


Fig. 5 Requirements Fluid Category 4 systems

4.3 Starting the heating system via the control panel

- Switch the boiler water thermostat to "AUT".
- Switch the ON/OFF switch on (position "I"). The entire heating system is switched ON.
- Check/adjust the following settings on the control panel:
  - Automatic operating mode
  - Required room temperature
  - Required DHW temperature when required
  - Required heating program when required

Operating information can be found in the control panel documentation.

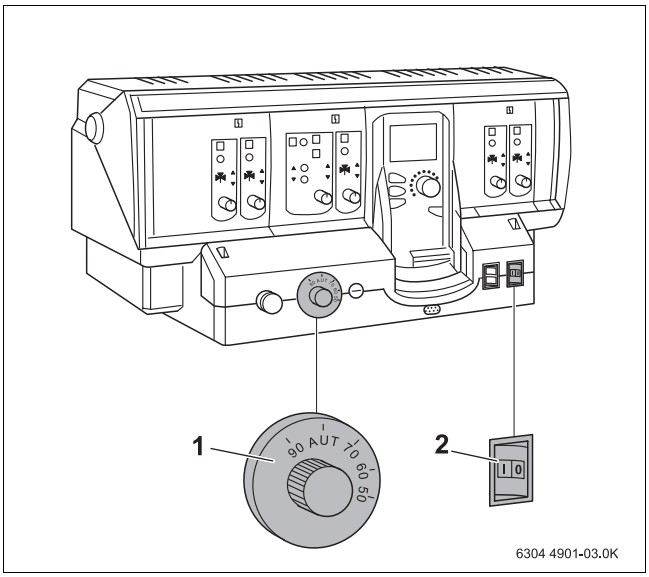


Fig. 6 Switching on the heating system

1 Boiler water thermostat

2 ON/OFF switch

5 Shutting down the boiler

5.1 Shutting down the heating system

- Switch the ON/OFF switch on the control panel OFF (position "0").
  This switches the boiler and all its components OFF (for example the burner).
- Close the main fuel shut-off valve.

Caution: System damage caused by frost

The heating system can freeze up in very cold weather if it has been switched off.

- Leave the heating system switched on all the time.
- Drain the heating system and DHW pipework at the lowest possible point to protect the heating system against freezing whilst it is switched off.

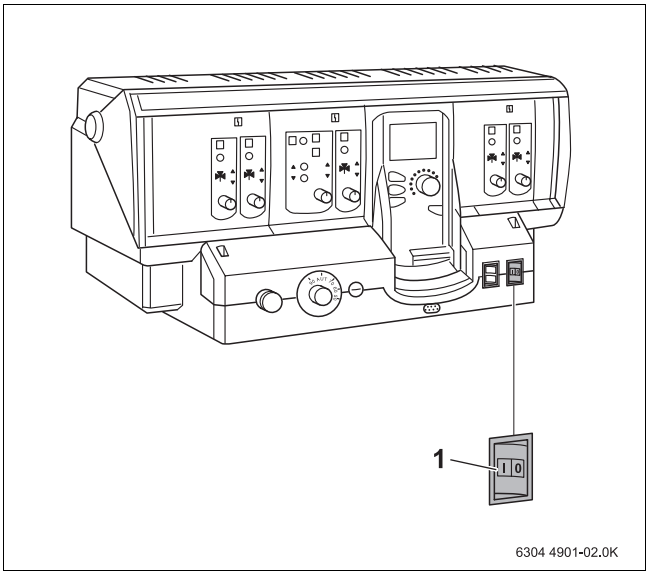


Fig. 7 Switching off the heating system

1 ON/OFF switch

5.2 Shutting down the heating system because of a risk of frost

If you need to shut down the heating system for a lengthy period, during which frost might occur, the heating system must be drained.

- Switch the ON/OFF switch on the control panel OFF (position "0").
  This switches the boiler and all its components OFF (for example the burner).
- Close the main fuel shut-off valve.
- Drain the heating system and DHW pipework at the lowest point. The automatic air vent at the highest point of the heating system or the air vent valve on the highest radiator must be open during draining.

5.3 Emergency measures

In the event of an emergency, e.g. a fire, proceed as follows:

- Never risk your own life. Your own safety is paramount.
- Close the main fuel shut-off valve.
- Isolate the heating system from the mains power supply using the heating system emergency stop switch or the corresponding domestic fuse.
- Contact the emergency services

6 Faults

Faults in the heating system are displayed on the control panel display. For further information on the fault displays please refer to the service instructions of the control panel concerned.

Caution: System damage caused by frost

The heating system can freeze up in very cold weather if it has been switched OFF through a fault shutdown.

- Rectify the fault immediately and restart the heating system.
- If this is not possible: Drain the heating system and DHW pipework at the lowest point.

Burner faults

A burner fault is also indicated by the fault lamp on the burner.

Caution: System damage

Repeated pressing of the reset button can damage the ignition transformer on the burner.

- Do not press the reset button more than three times in a row (for oil Burners only).
- If the fault does not reset after the third attempt: Try to identify the fault using the burner documentation. Contact an installer if necessary.

To reset burner faults:

- Press burner reset button.

Your installer:

Buderus

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